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United States Patent [19]

Bales et al.

[11] **Patent Number:** 6,024,708[45] **Date of Patent:** *Feb. 15, 2000[54] **RADIAL JAW BIOPSY FORCEPS**

[75] **Inventors:** Thomas O. Bales, Coral Gables;
Charles R. Slater, Fort Lauderdale;
Kevin W. Smith, Miami, all of Fla.

[73] **Assignee:** Symbiosis Corporation, Miami, Fla.

[*] **Notice:** This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

[63] Continuation of application No. 08/458,215, Jun. 2, 1995, Pat. No. 5,666,965, which is a continuation of application No. 07/837,046, Feb. 18, 1992, Pat. No. 5,507,296, which is a continuation of application No. 07/521,766, May 10, 1990, Pat. No. 5,133,727.

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[52] **U.S. Cl.** 600/564

[58] **Field of Search** 600/562-568;
606/167-171, 205-210

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Primary Examiner—Samuel Gilbert

Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

[57]

ABSTRACT

A biological forceps device for the taking of tissue samples from a body, comprising a flexible main coil attached at its distal end to a pair of homologous cast jaws. The jaws have radially arranged teeth on their distalmost end. The jaws are opened and closed by attachment to a pair of pull wires which extend through the main coil, into a handle at its proximal end, the handle has a spool which slides about a central shaft attached to the main coil. The spool is attached to the pull wires, so that movement of the spool with respect to the central shaft, effectuates a force on the proximal ends of the levered jaws, to open and close them, appropriately.

32 Claims, 3 Drawing Sheets

